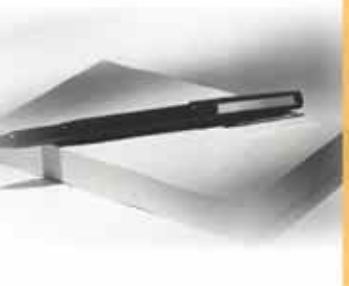

Guidelines on

Prevention of Communicable Diseases in Residential Care Homes for the Elderly

衞生署
Department of Health

Introduction

Effective prevention of communicable diseases in residential care homes for the elderly (RCHEs) will not only safeguard the health of the residents and the staff by minimizing the harm caused by the diseases, but will also reduce the chance of hospitalization of the residents and thus help to save community resources. It is therefore incumbent on every staff and resident to learn how to prevent communicable diseases. This guideline is intended to provide practical information on prevention measures of communicable diseases for those who work in RCHEs. Every employee of RCHEs has the responsibility to understand the guideline and to take care of the elderly according to what has been laid down therein. The guideline is prepared according to the previous version published in 2003. It is divided into seven sections. While individual staff may refer to the relevant sections as necessary, it is important for infection control officers (ICOs) to familiarize themselves with all the content so as to assist the responsible officers of the RCHEs in preventing the spread of communicable diseases within the institution. However, this set of guideline is not meant to be exhaustive. In case of doubt or when further information on specific communicable disease is needed, advice can be sought from the Visiting Health Teams (VHTs) of the Elderly Health Service of the Department of Health in different districts (please refer to section 6.4.2 for details). Lastly, opportunity is taken to thank the Hospital Authority and the Social Welfare Department for their invaluable comments during the revision of this guideline.

Editorial Board,
Department of Health
(2nd edition)

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1 Concepts of communicable diseases

1.1 What are communicable diseases?

Communicable diseases refer to diseases that can be transmitted and make people ill. They are caused by infective agents (pathogens) e.g. bacteria and viruses, which invade the body and multiply or release toxins to cause damages to normal body cells and their functions. In severe cases, they may lead to death. These infective agents can spread from a source of infection (e.g. patients, sick animals) to a person through various routes of transmission.

1.2 Chain of infection: infective agent-source of infection-mode of transmission-host

Apart from the infective agents, there are three other factors necessary for the occurrence of communicable diseases:

1.2.1 Source of infection

This refers to any environment, in which infective agents can live, parasitize and breed. It includes humans (e.g. patients, carriers and people with latent infections), livestock, insects and soil. The source of infection will normally form the basis for infective agents to infect humans.

1.2.2 Mode of transmission

Mode of transmission	Process	Examples of communicable diseases
Contact transmission • Direct Contact	Through direct body contact with the infected, e.g. lifting and assisting in taking baths	Scabies, Chickenpox, Head lice, Acute conjunctivitis
• Indirect Contact	Through contact with objects contaminated by infective agents, e.g. sharing towels, combs and clothes	
Droplet transmission	Through droplets expelled during sneezing, coughing, spitting and speaking, or subsequent touching of mucous membranes of the mouth, nose and eyes etc with hands contaminated with infective agents	SARS, Influenza
Airborne transmission	The infective agents float in the air for sometime and then enter the body through the respiratory tract	Chickenpox, Pulmonary tuberculosis (smear positive)
Common Vectors (e.g. food-borne, water-borne)	Infective agents enter the body through ingestion of contaminated food or water, or contact with contaminated devices like eating utensils, urinary catheters	Food poisoning, Cholera, Bacillary dysentery, Hepatitis A, Urinary tract infection

Mode of transmission	Process	Examples of communicable diseases
Vectors (insects)	The infective agents either parasitize and breed in the body of the insects, or contaminate the legs and mouths of the insects and then infect human when the insects bite humans or by cross-contamination	Dengue fever, Malaria (mosquito-borne), Infectious gastrointestinal diseases (fly-borne or rodent-borne)
Blood/Body fluid transmission	Transmitted through blood transfusion, tattooing, ear piercing or sexual intercourse	Hepatitis B, AIDS
Congenital Infection	Infective agents enter the foetus through the mother causing infection	Congenital syphilis

Note: Some communicable diseases have more than one mode of transmission.

1.2.3 Host (susceptible population)

Hosts refer to the susceptible population. Some people are more prone to become hosts. For instance, elders with chronic diseases are more susceptible to infection as a result of weakened body immunity.

1.3 Why are residential care homes for the elderly (RCHEs) more vulnerable to outbreaks of communicable diseases?

RCHEs are collective living places where communicable diseases can easily spread through close person-to-person contact. The frailty of the elders also aids the spread. The source of infection can be staff, visitors or residents (e.g. residents newly discharged from hospital). Person-to-person contact then leads to cross-infection, i.e. the transmission of infective agents from one person to another. For instance, a staff member who fails to wash hands after caring for a resident may spread the infective agents from that resident to the next resident he cares for.

1.4 Principles of control of communicable diseases

There are a number of factors crucial to the spread of communicable diseases. They include the infective agent, the source of infection, the mode of transmission and the host -- the so-called "chain of infection". Hence, the control of the spread of communicable diseases should focus on controlling these 4 factors so as to break the chain.

Factors of transmission	Control measures
Infective agent	- Disinfection to kill the infective agents
Source of infection	- Early detection, isolation and treatment of patients and removal of breeding sites
Mode of transmission	- Maintain good environmental, personal and food hygiene; adopt infection control measures appropriate to the different modes of transmission
Host (susceptible population)	- Build up personal immunity by immunization and healthy lifestyles

1.5 What are statutory notifiable communicable diseases?

Some communicable diseases are highly infectious and cause severe sequelae to such an extent that they threaten human lives and affect the economy. If there are proper precautionary or control measures in place, the disaster posed by these communicable diseases can be averted. The evolution of outbreaks of communicable diseases and their management vary to a certain extent with different countries or regions, where the types of communicable diseases occurred and the living environment are different. To safeguard public health and safety, every country or region has legislation stipulating certain communicable diseases as statutory notifiable diseases which warrant special precautions, and policies are developed to prevent outbreaks and to contain their spread. In Hong Kong, there are 32 statutory notifiable communicable diseases under the Quarantine and Prevention of Disease Ordinance (Cap. 141) (the list is attached in Appendix A). Attending doctors should report to the Central Notification Office (CENO), Centre for Health Protection (CHP) of the Department of Health if such cases arise. Furthermore, the persons-in-charge of RCHEs are required to report to the Director of Social Welfare of any suspected or confirmed cases of communicable diseases under section 18 of the Residential Care Homes (Elderly Persons) Regulation (Cap. 459A).

2 Communicable diseases in RCHEs

2.1 Common communicable diseases in RCHEs

Information shows that the most common infections in elderly homes are respiratory tract infections, urinary tract infections, and skin or subcutaneous tissue infections. Other common infections include infectious gastrointestinal diseases and acute conjunctivitis.

The typical signs and symptoms of these communicable diseases are listed as follows for staff reference.

Types of diseases	Infective agents	Mode of transmission	Signs and symptoms	Preventive measures
Upper respiratory tract infections (e.g. influenza, common cold, rhinitis, laryngo-pharyngitis)	Viruses (e.g. influenza viruses), bacteria (e.g. *Streptococcus pneumoniae*)	Droplets; touching of mucous membranes of the mouth, nose and eyes with hands contaminated with the infective agents	Fever, fatigue, cough, sneeze, running nose, sore throat, muscle aches	Maintain good ventilation and personal hygiene; perform hand hygiene before and after caring for each resident; may wear surgical masks during close contact with patients; have adequate rest and nutrition to build up body immunity.

Types of diseases	Infective agents	Mode of transmission	Signs and symptoms	Preventive measures
Lower respiratory tract infections (e.g. acute bronchitis, pneumonia)	Viruses (e.g. influenza viruses), bacteria (e.g. *Streptococcus pneumoniae*)	Droplets; touching of mucous membranes of the mouth, nose and eyes with hands contaminated with the infective agents	Fever, fatigue, cough, thick sputum, sputum with blood, shortness of breath	Observe respiratory hygiene/cough etiquette: any individual including residents should put on a surgical mask when there is respiratory symptom if applicable and tolerable.
Urinary tract infections	Bacteria (e.g. *E. coli*)	Usually caused by bacteria which move from the large intestine to the urinary tract. More commonly found in women, people with urinary catheters, diabetic, etc.	Fever, urination with stabbing pain, frequent urination, urinary urgency, nocturia, urinary incontinence, lower abdominal pain, low back pain, hematuria, cloudy urine, etc.	Maintain good personal hygiene; women should wipe their genitalia from the front to the back after urination; ensure adequate fluid intake; avoid holding back urine; avoid putting urinary bags at high position for people with urinary catheters; maintain good hygiene when changing urinary bags.

Types of diseases	Infective agents	Mode of transmission	Signs and symptoms	Preventive measures
Skin and subcutaneous tissue infections	Parasites (e.g. scabies, head lice), bacteria (e.g. *Staphylococcus aureus*, *Streptococcus pneumoniae*), fungi (e.g. moniliasis, tinea)	Contact transmission	Itching, localized rash, desquamation, swelling, scales, etc, suppurating or smelly wounds (e.g. pressure sores)	Wear gloves during patient contact and arrange early medical treatment for the patients; disinfect the linen and clothing of patients with scabies following protocol or instruction.
Infectious gastrointestinal diseases	Viruses (e.g. rotaviruses, Noroviruses), bacteria (e.g. Salmonella, *Staphylococcus aureus*, *Vibrio cholerae*)	Consuming contaminated food or water; contact with vomitus or faeces from infected persons, contaminated object, or aerosols (in case of Norovirus infection (Appendix N))	Abdominal pain, vomiting, diarrhoea, lack of appetite, fatigue, fever	Maintain good personal, food and environmental hygiene; wash hands after using the toilet; food handlers should refrain from work and seek early medical advice if falling sick; proper handling of vomitus and excreta.
Acute conjunctivitis	Viruses, bacteria	Contact transmission	Redness of eyes, itching eyes, excessive tears, abnormal secretion	Never share towels; observe good personal hygiene; perform hand hygiene before touching the eyes.

2.2 Other important communicable diseases in RCHEs

Types of diseases	Infective agents	Mode of transmission	Signs and symptoms	Preventive measures
AIDS	Viruses	Blood/body fluid transmission	Cannot resist the invasion of infective agents because of impaired body immunity. No specific symptoms. May have persistent fever, uncommon infections and/or tumors etc.	Never share toothbrushes, razors or other objects likely contaminated by blood. Standard precautions should be strictly followed when clearing up objects contaminated by blood. Avoid unprotected/ unsafe sex.
Hepatitis B	Viruses	Blood/body fluid transmission	Fever, jaundice, fatigue, loss of appetite	Ditto. Staff may also consider vaccination against hepatitis B.
Pulmonary tuberculosis (smear positive)	*Mycobacterium tuberculosis*	Airborne transmission	Persistent fever, cough, sputum with blood, fatigue, weight loss, night sweating	Have adequate rest and nutrition; maintain good ventilation and environmental hygiene. Do not spit. Observe respiratory hygiene/cough etiquette: any individual including residents should put on a surgical mask when there is respiratory symptom if applicable and tolerable.

Types of diseases	Infective agents	Mode of transmission	Signs and symptoms	Preventive measures
Myiasis	Larvae of flies	Flies lay their eggs on mucous membranes or wounds	Larvae crawl out from the mouth, wound etc. and there are purulent and smelly discharges	Maintain good oral hygiene for residents especially for those requiring nasogastric tubes for feeding. Wounds should be properly treated. Maintain good environmental hygiene. Install appropriate fly screen and repellent devices.
*SARS	Coronaviruses	Droplets, touching of mucous membranes of the mouth, nose and eyes with hands contaminated with the infective agents	Fever, fatigue, headache, chill, cough, shortness of breath, difficulty in breathing, diarrhoea	Have adequate rest and nutrition to build up body immunity. Observe good personal hygiene. Wear surgical masks. Perform hand hygiene before and after resident contact. Maintain good ventilation and environmental hygiene.

Note: *For detailed guidelines on the prevention of SARS, please visit the following websites: www.info.gov.hk/info/sars/eindex.htm; www.elderly.gov.hk; www.swd.gov.hk

2.3 Early signs and symptoms of infection in the elderly

2.3.1 Although most elders develop the above common symptoms when infected, some elders (especially those older and feeble ones) may have less obvious symptoms. When they are infected, it would be more difficult to detect and treatment would be delayed, thus increase the risk of transmission. For those with cognitive impairment (such as elders with dementia), communication problems with carers may arise, leading to late detection of infection.

2.3.2 Carers should carefully look for the following signs and symptoms which may indicate infection in the elders.

- The body temperature is 1℃ higher than the usual temperature:
  Most elders have fever when severely infected, but the body temperature for some may not exceed the normal range. If the temperature is 1℃ higher than his/her usual body temperature, he/she may have underlying infection.
- Disoriented, confusion, restlessness:
  Many diseases may cause such symptoms in the elders. Infection is one of the important causes for such symptoms. If the elders, especially the frail ones with chronic illnesses, are found to develop such symptoms, carers should arrange them to seek medical advice promptly.
- Unexplained changes in behaviours and body functions:
  Unexplained behavioural changes may be caused by mental confusion. Changes of body functions like loss of bladder control may be due to infection like urethritis, or secondary to confusion.
- Loss of appetite and/or unexplained weight loss
- Weaker than usual
- Lethargy
- Fall
- Shortness of breath
- Palpitation

2.3.3 The above are the common bodily changes among the infected elders. To detect such changes, carers should familiarize themselves with the daily physical conditions and behavioural patterns of the elders. As such, proper personal health records should be maintained for each resident and their temperatures checked regularly. In addition, carers should pay more attention to elders who have special health conditions or with medical devices attached to their bodies, since they are more vulnerable to infection than others. For details, please refer to the checklist of signs and symptoms of communicable diseases in Appendix C. The checklist is a reminder to help infection control officers (ICOs) to carry out preliminary health assessment on individual residents for early detection of infections and prompt medical treatment.

2.4 Management of suspected cases of communicable diseases among residents or staff

The operator of RCHE should appoint either a nurse or a health worker as an Infection Control Officer (ICO) who is the key person responsible for dealing with matters related to infection control and prevention of the spread of infectious diseases in the residential care home. ICOs should observe the following principles in preventing the spread of communicable diseases:

- Medical surveillance - maintain and keep proper personal health records of residents, and carefully assess their signs and symptoms.
- Early treatment - to avoid secondary spread by the infected residents or staff.
- Spread prevention - appropriate isolation precautions should be adopted with respect to the mode of transmission of respective communicable diseases to avoid outbreaks and further evolution into an epidemic. For example, patients with respiratory tract infections should wear masks; excreta of elders should be properly disposed of; the guidelines for hand hygiene should be strictly observed etc. If in doubt, promptly notify CENO and the Licensing Office of Residential Care Homes for the Elderly of the Social Welfare Department for follow-up investigation.

NB. The duty list of ICOs is detailed in Appendix B.

2.5 Measuring body temperature

2.5.1 The importance of taking body temperature

Most elders develop fever when infected, but there are exceptions. Some elders have lower baseline body temperatures, which rise slightly when they are infected but still within the normal range. Effective surveillance of body temperature changes can only be carried out when self-comparison can be made with the usual body temperature of the elders. RCHE staff should thus regularly take accurate body temperature for the elders. Temperature should be taken more frequently under the following circumstances:

- Residents with communication problems and those who are feeble
- During outbreaks of communicable diseases, particularly influenza-like illnesses and SARS
- When residents develop symptoms of infection (please refer to Appendix C for details)
- Residents newly discharged from hospital

2.5.2 What should be done when residents develop fever?

The normal temperature of human body (oral temperature) ranges from 36.1℃ to 37.2℃. If a resident is found to have fever or have a temperature being 1℃ higher than his usual one, staff should be alert and note it down on the fever record for residents (see Appendix D) and the resident's personal health record. The ICO should read the fever record everyday for early detection of residents with health problems, and check against the checklist of signs and symptoms of communicable diseases in Appendix C. Assistance can be sought from the Visiting Medical Officer (VMO) or the healthcare workers of the Community Geriatric Assessment Team (CGAT) when necessary.

2.5.3 Accurate measurement of body temperature

Body temperature can be divided into core temperature and surface temperature. Core temperature refers to the temperature of deep tissues, which can be taken through the oral cavity, rectum or ear, whereas surface temperature is the temperature of surface skin tissues, which can be taken through the armpit. Surface temperature is more susceptible to changes in the surroundings. To avoid inaccuracy in measurement, the following should be noted:

- Residents should avoid exercise or having excessively cold or hot food and drinks within 30 minutes before taking temperature.
- To familiarize with the correct use of thermometers before taking temperature.
- For each particular resident, it is preferable to take the daily temperature from the same body part at the same time of the day using the same temperature taking method to avoid deviations caused by changes in the surroundings or the use of different measurement methods.

2.5.4 Choice of thermometers

In general, there are mercury, digital, chemical LCD and infrared ear thermometers, etc for taking oral, rectal, armpit, ear and forehead temperature. Before using a specific thermometer, read the instructions carefully for the proper procedures of using the thermometer and the reference range of the readings. Accuracy, suitability and convenience should all be taken into account when choosing the appropriate thermometer. RCHEs that require rapid temperature taking because of the setting and working conditions may use infrared forehead thermometers. Such devices, however, are less accurate in reflecting the true core body temperature. Hence, unless absolutely necessary, it should be avoided as far as possible as the only type of thermometer used for taking temperature.

2.5.5 Methods of taking body temperature

Taking ear temperature: It is non-invasive and therefore has little limitations on its application. It is particularly suitable and recommended for use in RCHEs. First, stabilize the head position of the resident. Pull the ear backwards and upwards to make the ear canal straight. Fit the probe tip covered with a plastic jacket slightly into the depth of the ear canal. The temperature taken from the ear is 0.5℃ higher than the oral temperature. Follow the instructions to make suitable adjustments when using an ear thermometer.

Points to note:
- Direction of the probe tip should be correct, otherwise it will give an inaccurate reading.
- The ear pressed against the pillow during sleeping has a higher temperature, so the other ear should be used for taking temperature if one is just awake.
- Not applicable to elders with obstruction of ear canal caused by ear wax or otitis.

- Taking oral temperature: Suitable for elders who are conscious, cooperative and who can close their mouths tight. Staff should place the thermometer under the tongue near the root. Instruct the resident to close the mouth tight but not to bite on the thermometer or talk. Wait for 3 to 5 minutes when using a mercury thermometer before checking the reading. If the resident carelessly bites off the mercury thermometer, he/she should be sent to the hospital immediately for treatment.

  Points to note: - Close the mouth when taking temperature. Do not speak.
  - Avoid cold or hot food before taking temperature.
  - Not applicable to residents who are unconscious, confused or who cannot close their mouths tight.

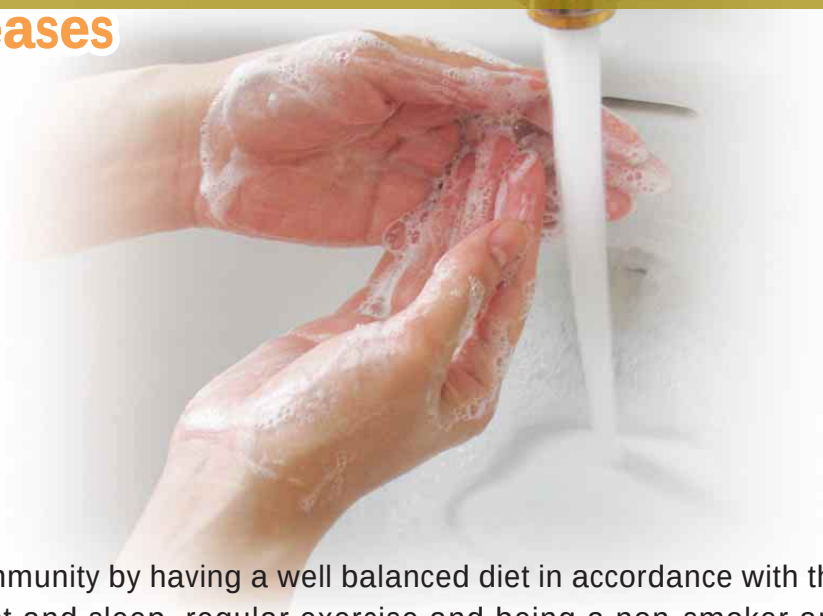
- Taking armpit temperature: Suitable for conditions when all the above are not applicable. Ensure privacy and protect the residents from catching cold when taking temperature. Put the thermometer under the armpit, and place the forearm of the resident horizontally on the chest to keep the thermometer in position. Wait for 6 to 8 minutes before checking the reading. Armpit temperature is usually 0.5℃ lower than oral temperature, so it should be recorded as the armpit temperature.

  Points to note: - The thermometer should be held tight under the armpit without clothes in between when taking temperature.

2.5.6 Cleaning and disinfection of body temperature measuring instrument after use

- Mercury thermometer - wash with cold water and detergent first; immerse in 70% alcohol for not less than 10 minutes; air dry and then store in dry place.
- Oral and rectal thermometers should be treated separately. Patients with communicable diseases should use separate personal thermometers to avoid cross-infection.
- Electronic thermometers must not be immersed in disinfectants or disinfected with high heat because it will damage the electronic components and affect the instrument's normal functioning. The cleaning procedures recommended in the user manual of the electronic thermometers should be followed.

3 General guidelines on prevention of communicable diseases



Building up immunity by having a well balanced diet in accordance with the food pyramid, adequate rest and sleep, regular exercise and being a non-smoker are all vital to the prevention of communicable diseases. Moreover, good personal, food and environmental hygiene should be observed.

3.1 Personal hygiene

Since many communicable diseases are transmitted through direct contact, performing hand hygiene properly is a prerequisite for the prevention of such diseases. The persons-in-charge of a RCHE should provide the staff and residents with adequate facilities for performing hand hygiene.

3.1.1 RCHE staff should follow the procedures described in section 3.1.3 and Appendix E to perform hand hygiene:

- after sneezing or coughing;
- after using the toilet;
- before handling, preparing and serving food;
- when implementing any nursing procedures:
  - before and after having direct contact with residents
  - before handling an invasive device (e.g. urinary catheter) for resident care
  - after contacting blood, body fluids, secretions, excretions, wounds or mucous membranes e.g. after diapering a resident or after cleaning the respiratory secretions of the residents
  - if moving from a contaminated body site to a clean body site during resident care
- after taking off the gloves;
- after contacting contaminated objects or environments.

(Note: 1. When hands are visibly soiled, handwashing should be performed. 2. When hands are not visibly soiled, application of alcohol-based handrub is equally effective. 3. Wearing gloves can never substitute for hand hygiene. Always perform hand hygiene after taking off the gloves.)

3.1.2 RCHE staff should encourage residents to wash their hands:

- before touching mouth, nose and eyes;
- before eating or handling food;
- after using the toilet;
- when hands are contaminated by respiratory secretions, e.g. after coughing or sneezing;
- after touching public installations or equipment, such as escalator handrails, elevator control panels or door knobs;
- after changing diapers or handling soiled articles;
- after making contact with animals or poultry.

3.1.3 Proper procedures for handwashing (Appendix E):

Wash hands with liquid soap thoroughly according to the following procedures:

- Take off watches, rings and accessories to achieve best washing results.
- Wet hands under running water.
- Apply liquid soap and rub hands together to make a soapy lather.
- Away from the running water. Rub the palms, back of hands, between fingers, backs of fingers, thumbs, finger tips and wrists for at least 20 seconds.
- Rinse hands thoroughly under running water after rubbing.
- Dry hands thoroughly with a clean cotton towel, a paper towel or a hand dryer.
- The tap may be turned off by wrapping the faucet with the paper towel, or clean the faucet after splashing with water or asking someone for assistance. Avoid touching the faucet again with washed hands.

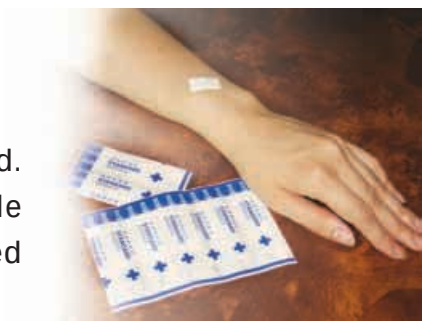
Towels should never be shared and should be hung up immediately after use and washed thoroughly at least once a day.

3.1.4 Respiratory hygiene should also be observed (Appendix F). Do not spit. Cover nose and mouth when coughing or sneezing. Sputum should be wrapped up with tissue paper and discarded into garbage bins with lids or flush them away in the toilet. Perform hand hygiene immediately after contacting respiratory secretions or touching objects contaminated with respiratory secretions. Put on a surgical mask for those with signs and symptoms of respiratory infection.

3.2 Food hygiene

3.2.1 Choice of food

- Buy fresh meat and vegetables.
- Do not patronize illegal food hawkers.
- Do not buy packaged food without proper labeling, beyond its expiry date or with damaged packages.
- Do not buy ready-to-eat food and drinks that are displayed together with raw products.
- Do not buy food which looks, smells or tastes abnormal.
- Avoid unpasteurized dairy products like raw milk.
- Do not buy excessive food to avoid problems arising from prolonged storage.



3.2.2 Preparation

- Wash hands properly before preparing food.
- Wear mask and washable or disposable aprons and cap during handling of cooked food.
- Protect wounds on hands with waterproof dressing to prevent passing infective agents from the wounds to food.
- Wash food thoroughly and scrub with a brush when appropriate.
- Handle/store raw foods and cooked foods separately. Use separate knives and chopping boards for each to avoid cross-contamination.
- Discard the outer leaves of leafy vegetables and immerse the vegetables in water for 1 hour before washing to eliminate possible pesticide residues.
- Frozen meat or fish must be thawed completely before cooking.

- Cook food thoroughly before consumption.
- Sample food with a clean spoon, not with fingers.
- Consume food as soon as it is cooked.
- Do not prepare too much food at one time to avoid wastage or over-stocking.
- Cooked food taken out from the refrigerator should be reheated thoroughly before consumption.
- Do not touch cooked food with bare hands.
- Staff should not handle food if suffering from illnesses such as fever, diarrhoea and vomiting.
- Do not smoke while handling food.

3.2.3 Storage

- Store food in well-covered containers.
- Never leave perishable food at room temperature.
- Store perishable food in refrigerator immediately after purchase. Before refrigeration, pack the food into smaller portions if it is not intended for use in one go.
- Surplus food should preferably be disposed of, or stored in the refrigerator if need to be retained.
- Make sure that the refrigerator is clean and functioning properly, and clean it at regular intervals. Keep the temperature inside the refrigerator at or below 4℃ and the freezer at or below -18℃. Each refrigerator should have a temperature log book with temperature recorded regularly.
- Avoid overcrowding to allow adequate ventilation inside the refrigerator.
- Do not wrap food with newspaper, unclean paper or coloured plastic bags.

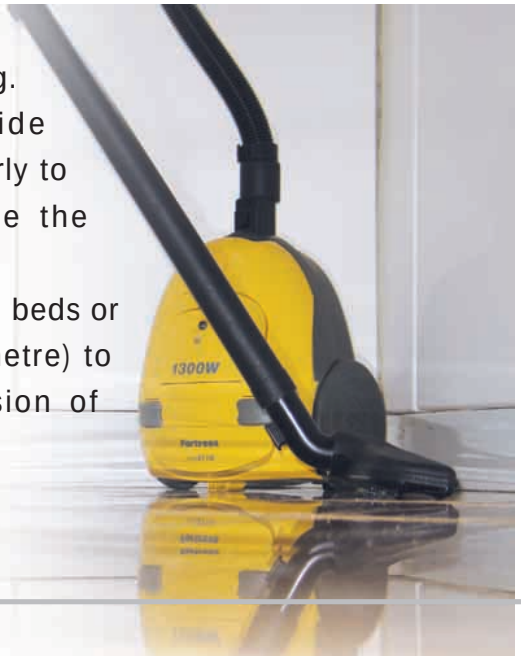
RCHEs should implement the World Health Organization's ten principles for safe food preparation (Appendix G).

3.3 Environmental hygiene

Since infective agents can survive in the environment for a period of time, it is essential to observe environmental hygiene.

3.3.1 Keep the environment of RCHEs clean and hygienic:

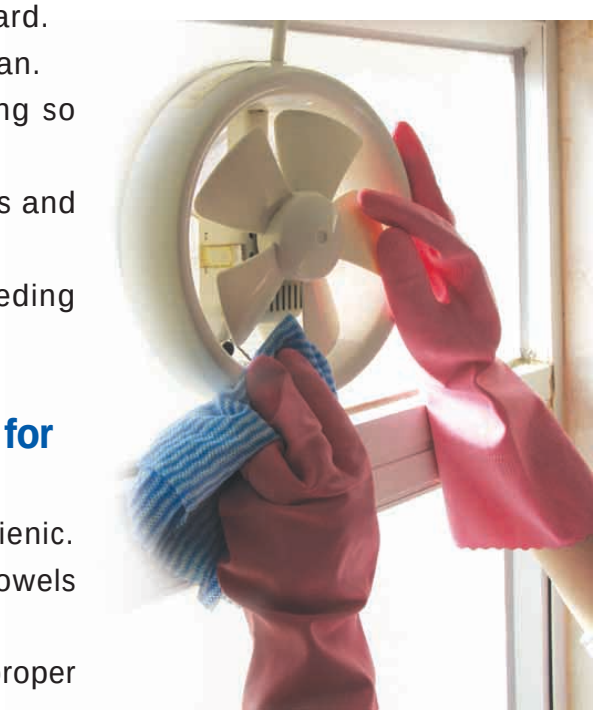
- Always open the windows for good indoor ventilation. Fans/exhaust fans can be used to improve indoor ventilation.
- Clean the dust-filters of air-conditioners regularly.
- Clean and disinfect frequently touched surfaces, furniture, rehabilitation aids, floor, toilets and bathrooms regularly with 1 in 99 diluted household bleach (mixing one part of 5.25% bleach with 99 parts of water) until dry and then rinse with water.
- For places soiled by secretions or excreta, disinfect with 1 in 49 diluted household bleach (mixing 1 part of 5.25% bleach with 49 parts of water), leave for 15-30 minutes and then rinse with water and keep dry.
- For spillage of blood, cleanse the visible matter with disposable absorbent material wetted with 1 in 4 diluted household bleach (mixing one part of 5.25% bleach with 4 parts of water), leave for 10 minutes and then rinse with water and keep dry.
- Clean the floor regularly and increase the frequency as the circumstances require. The floor should be kept dry after cleaning so that residents and staff will not slip on it. Floor/carpets should be kept clean by regular washing and daily vacuum cleaning.
- Clean and examine the bedside cupboards of the residents regularly to avoid food remnants and hence the breeding of pests and rodents.
- Keep appropriate distance between beds or groups of beds (not less than 1 metre) to reduce the chance of transmission of infective agents by droplets.



- Empty water in the saucers underneath flower pots and change water in vases at least once a week. Top up all defective ground surfaces to prevent accumulation of stagnant water and breeding of mosquitoes. To prevent rodent infestation, avoid stacking of unnecessary articles.
- Commence clean-up actions immediately when there are any signs of pest or rodent infestation such as excreta of rats, cockroaches, mosquitoes and flies. In case of need, call the Food and Environmental Hygiene Department hotline at 2868 0000 or relevant departments to follow up.
- For a hygienic environment, it is not advisable to keep pets like dogs and cats in the RCHE.

3.3.2 Maintain a clean and hygienic kitchen:

- Keep the kitchen clean; wash the exhaust fan and range hood regularly; and store eating utensils in a clean cupboard.
- Worktops in the kitchen should be kept clean.
- The floor should be kept dry after cleaning so that residents and staff will not slip over.
- Do not store personal items such as clothes and shoes in the kitchen.
- Cover garbage bins properly to avoid breeding of cockroaches, flies and rodents.



3.3.3 Cleaning and disinfection measures for toilets and bathrooms:

- Keep toilets and bathrooms clean and hygienic.
- Provide liquid soap and disposable paper towels or hand dryers for washing hands.
- Ensure the flushing system of the toilet is in proper function all the times.
- Make sure that the drain pipes are built with U-shaped water traps; do not alter the pipelines without authorization.
- Pour about half a litre of water into each drain outlet regularly (about once a week) so as to maintain the water column in the pipe as water lock to prevent the spread of micro-organisms.
- Make sure that the soil pipes are unobstructed and the sewage drains are functioning properly without leakage so as to avoid breeding of infective agents.

3.3.4 Disposal of waste:

- Garbage bins should be covered with lids.
- Rubbish should be properly wrapped up and discarded into garbage bins with lids.
- Garbage bins should be emptied at least once a day. Staff should wash their hands thoroughly after handling refuse.

3.3.5 Floor mop/wiper and other cleaning utensils contaminated with body fluids or blood should be treated properly after use for re-use:

- Rinse floor mop/wiper or other cleaning utensils with water to remove solid/bulky waste if any.
- Disinfect such utensils by immersing them in 1 in 49 diluted household bleach (5.25%) for 30 minutes.
- Then wash with detergents and clean water.
- Re-use after drying out.

3.3.6 Choice of disinfectant

Generally speaking, household bleach, which normally contains 5.25% available chlorine, is the most convenient and effective disinfectant. 1 in 99 diluted household bleach (5.25%) is sufficient for general cleaning purpose though 1 in 49 diluted household bleach (5.25%) should be used for places contaminated with excreta or secretions. Besides, many detergents on the market claim to have a disinfectant composition. Purchasers should check whether the claim is genuine and should note the directions for use because the effectiveness of different disinfectants will be different. (Please refer to Appendix H1 for details.)

3.4 Vaccination

Elders suffering from influenza will develop fatal complications more easily. Therefore, unless vaccination is contra-indicated, residents and staff should be encouraged to receive influenza vaccination provided by the Department of Health to enhance their immunity and help prevent complications caused by influenza.

4 Preventive measures to be adopted by RCHE staff against communicable diseases

Apart from general hygienic practice and vaccination, staff of RCHEs should also adopt appropriate preventive measures against communicable diseases. The measures fall under two main categories:

- Standard precautions - applicable to all staff and residents
- Transmission-based precautions - precautions based on the mode of transmission

In addition, isolation of residents with communicable diseases, urging visitors to observe the RCHE's rules on prevention of communicable diseases and nursing high-risk residents with greater caution will also help to minimize the chance of outbreak of communicable diseases in the RCHE. The ICO of the RCHE should be responsible for the supervision and coordination.

4.1 Standard precautions

4.1.1. What are standard precautions?

Standard precautions are designed to reduce the risk of transmission of infective agents from recognized or unrecognized sources of infection. They are applicable to all staff and residents. When coming into contact with or taking care of the residents, staff should regard blood, all body fluids, secretions and excretions (except sweat) like excreta, saliva, sputum, vomitus or secretions from wounds, non-intact skin like wound, and mucous membrane as potentially infectious, and adopt appropriate and relevant protective measures in different situations.

4.1.2 Aspects include:

- Hand hygiene
- Use of personal protective equipment
- Handling of contaminated articles
- Handling of sharps

4.2 Hand hygiene

Hand hygiene is a general term referring to any action of hand cleansing. It is a basic infection control measure to prevent the spread of communicable diseases. The common hand hygiene practices recommended include hand washing and proper use of alcohol-based handrub.

4.2.1. Basic rules of hand-washing

- Research shows that washing hands properly is the most effective way to prevent transmission of communicable diseases. Staff who have neglected the importance of proper hand-washing often become carriers of different infective agents and lead to cross-infection in the institution (please refer to section 1.2.2 for mode of transmission). Therefore, both hands should be washed with liquid soap before and after caring for each resident. Even though gloves are worn, hands should still be washed with liquid soap after the gloves have been taken off.
- Alternatively, if hands are not visibly soiled, application of alcohol-based handrub is equally effective.
- Improper hand drying will also result in cross-infection to others through contaminated hands. Both disposable paper towel and hand dryer are proper means for hand drying.
- Proper hand hygiene techniques should be observed and followed irrespective of whether water with liquid soap or alcohol-based handrub is used.

4.2.2. Proper procedures for handwashing (Appendix E):

Please refer to section 3.1.3 for details.

4.2.3 Use of alcohol-based handrub

If hands are not visibly soiled, application of alcohol handrub is equally effective.

- Apply alcohol-based handrub and rub the palms, backs of hands, between fingers, backs of fingers, thumbs, finger tips and wrists for at least 20 seconds.
- Let the alcohol evaporate naturally. Do not use paper towels to dry.

4.3 Use of personal protective equipment (PPE)

To minimize the risk of being infected or becoming the vector unknowingly, staff should use appropriate PPE at work according to the risk of the nursing procedure and the physical condition of the resident so as to safeguard themselves and others. Appropriate PPE should be stocked up.

4.3.1 Gloves:

Gloves should be worn when handling blood, body tissues, excreta, body fluids, secretions or any other contaminated wastes. Mucosa and wounds should only be touched after putting on clean gloves. Gloves contaminated by body secretions should be changed beforehand even though the same resident is being nursed. Take off used gloves and perform hand hygiene immediately before nursing other residents so as to avoid transmission of infective agents to other residents or contamination of the RCHE's environment. Please note that wearing gloves cannot substitute for hand hygiene.

4.3.2 Surgical masks, goggles and face shields:

Surgical masks, goggles or face shields can protect the mouth, nose and eyes from contamination by droplets via sneezing/coughing, blood spill, body fluids, secretions and excreta like sputum, urine or faeces during the process of nursing.

4.3.3 Protective gowns:

Putting on clean protective gowns (not necessarily disinfected) can protect our skin and prevent our clothes from contamination by respiratory droplets, blood spill, body fluids, secretions, urine or faeces during the process of nursing. Contaminated protective gown should be taken off carefully and hand hygiene should be performed immediately afterwards to avoid spread of infective agents.

4.3.4 Other PPE such as caps and shoe covers can protect hair and shoes from contamination by secretions during the process of nursing and hence minimize the risk of transmission of infective agents from the hair and shoes of the staff to other places.

4.4 Handling of contaminated articles

Used articles may become indirect vectors for infective agents. Appropriate precautionary measures should therefore be taken in their handling.

4.4.1 Linen

- Infective agents can be transmitted through contact with linen. Therefore, all linen should be washed thoroughly before re-use and appropriate PPE (e.g. gloves, masks, and if appropriate, disposable gowns/aprons) should be used during the process of handling.
- Cleaning procedures include removal of stains with detergent, rinsing with water, drying, ironing and storage in clean and dry cabinets.
- All soiled clothes should have the solid and bulky waste cautiously removed first and handled separately. They should be immersed in 1 in 49 diluted household bleach (mixing 1 part of 5.25% bleach with 49 parts of water) for 30 minutes before routine treatment.

4.4.2 Instrument

- To avoid cross-infection within the RCHE, all instruments or articles used should be cleaned and disinfected thoroughly before re-use.
- If stained with large amount of blood, wipe it with thick paper towels dipped in 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and leave for 10 minutes before cleansing and disinfection.
- Please refer to Appendix I for cleansing and disinfection of articles commonly used in RCHEs.

4.5 Handling of Sharps

- Take extra care when disposing of sharps.
- Do not recap used needles.
- If recapping is necessary, use recapping aids to avoid being pricked by contaminated needles.
- Syringes and sharps must be disposed of in a puncture-proof and spill-proof container labeled "Sharp Box" and "Biohazard" on the outside.
- Take note of the capacity of the sharp box. While mandatory daily disposal of sharp boxes is not necessary, a sharp box should not be overloaded and should be disposed of properly when it is 3/4 full.
- Keep sharp boxes clean and dry.
- Seal the sharp box and dispose in a well-fastened robust plastic bag with a warning signs reading "Biohazard" or "Beware of Sharps" to alert others during disposal. Please refer to the guideline on the disposal of clinical waste by Environmental Protection Department for details. If there is a substantial amount of clinical wastes and sharps for disposal, it is best to contact a clinical waste collector. Pay attention to any amendment of the legislation on clinical waste handling and make the corresponding arrangements for compliance. If in doubt, contact the Territory Control Office of the Environmental Protection Department at 2835 1055 for enquiry.

4.6 Transmission-based precautions

In addition to general hygiene practices, vaccination and standard precautions, specific preventive measures should be adopted when dealing with diseases with different modes of transmission.

Preventive Strategy	Examples of Disease	Preventive Measures
Standard precautions	All communicable diseases	- As list under section 4.1.
Droplet precautions	Influenza,SARS	- Maintain good indoor ventilation. - Cover mouth and nose when sneezing or coughing. - Use tissue paper to contain respiratory secretions and dispose them in garbage bin with lid. - Keep both hands clean. In particular, perform hand hygiene properly and immediately after making contact with patients or handling respiratory secretions. - Sick residents, staff and visitors should wear surgical masks. - Try as much as possible to keep a distance of at least one meter from the patient. - Adopt proper isolation. - Use appropriate PPE when necessary.
Airborne precautions	Pulmonary tuberculosis (smear positive)	- Maintain good indoor ventilation. - Cover mouth and nose when sneezing or coughing. - Dispose used tissue paper properly. - Keep both hands clean. In particular, perform hand hygiene properly and immediately after making contact with patients or handling respiratory secretions. - Sick residents, staff members, carers or relatives should wear surgical masks. - Adopt proper isolation.
Contact precautions	Conjunctivitis, Head lice, Scabies, Gastroenteritis	- Keep both hands clean and perform hand hygiene properly. - Clean and disinfect items used by patients properly. - Do not share towels and other personal items. - Wear gloves when making contact with patients. - Adopt proper isolation.

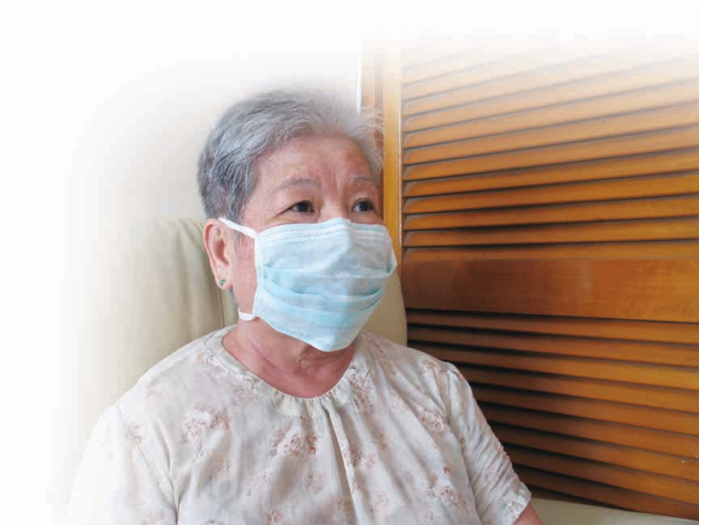
Note: Some diseases can be transmitted by more than one mode. To prevent the spread of such diseases, combined preventive measures should be considered.

4.7 Isolation measures

If a resident is suspected to have contracted a communicable disease, he/she should be temporarily isolated. Infection control measures should be strictly implemented so as to protect uninfected residents, staff members and visitors and to stop the spread of the communicable disease. Isolation measures include:

- Reserve some quiet, separate designated area/rooms in the RCHEs for nursing those residents showing respiratory symptoms or infected with communicable diseases.
- Carers should try, as much as possible, to attend to both the physical and psychological needs of the isolated resident in order to reduce sense of loneliness.
- Staff members entering the designated area/rooms to work should take appropriate protective measures, including hand hygiene, wearing surgical mask and the use of other suitable PPE.
- Separate designated area/rooms should be available at any time and should not be used for any other purpose.

If a resident is confirmed or suspected of SARS or other serious communicable diseases, staff from the DH will help the RCHE to delineate "high risk" and "low risk" zones and draw up working procedures. For details, please follow the instruction of DH staff.



4.8 Rules for visitors

Visitors should be advised to comply with infection control measures so as to prevent the spread of the disease. The followings are rules for visitors:

- Advise visitors to pay attention to their personal health conditions. In case of illness such as influenza, they should not visit the RCHE so as to avoid the spread of the disease to residents.
- Ask all visitors, including healthcare workers and relatives to wear surgical masks if they develop respiratory symptoms.
- If necessary, visitors should comply with the request of the RCHE by filling out the visiting dates and other information required for the necessary follow-up by the Department of Health.
- In case of outbreaks or by advice from the Department of Health, visitors should refrain from visiting the RCHE to prevent cross-infection. If necessary, other means such as telephone calls can be used to contact the residents. If visits must be made, advise visitors to take preventive infection control measures, including wearing surgical masks, cleaning hands thoroughly with liquid soap or alcohol-based handrub before and after visits or wearing appropriate PPE as recommended in accordance with the type of the disease and the severity of the outbreak.

4.9 Guidance notes on nursing procedures

In addition to the correct use of PPE and implementation of preventive measures mentioned above, a proper and appropriate nursing protocol can also reduce the risk of infections in the residents. The followings are points to note for common nursing protocols adopted by RCHEs.

4.9.1 Residents requiring the insertion of urethral catheter are exposed to a higher risk of urethritis. Risk-reducing methods include:

- Minimize the need for catheters by means of bladder training.
- If insertion is required, use small-size catheters to lower the risk of infection.
- The catheter should be changed by experienced and qualified healthcare professional.
- Perform hand hygiene thoroughly before and after the insertion procedure.
- Residents without medical contra-indications should be encouraged to drink plenty of water to help dilute the urine and optimize the urine flow required for irrigation of the catheter.
- Check if the resident has cloudy and smelly urine, malaise or fever. If so, seek medical consultation promptly.
- Keep the urine bag clean and change it regularly as required. Keep watch on and record the urine output.
- Observe the height of the urine bag regularly, especially when helping the resident to change positions. The urine bag should always be placed below the level of the bladder to avoid reflux which may lead to urinary tract infection.
- Do not disconnect the urinary bag from the catheter. If deemed necessary, perform hand hygiene and disinfect the connection part with alcohol swab after disconnection and before reconnection.

4.9.2 Residents requiring nasogastric tube for feeding are exposed to a higher risk of aspiration pneumonia. Risk-reducing methods include:

- Observe proper feeding procedures and in particular the position of the resident (for example, bed-bound residents should be propped at an sitting angle of at least 30^{o}).
- Make sure that the nasogastric tube goes into the stomach.
- Pay attention to the cleaning method of the feeding set, the temperature of the food and the distance between the feeding syringe/funnel and the resident.
- The nasogastric tube should be changed regularly by the resident nurse or the community nurse. After each feed, the feeding set should be flushed with running water and air dried before putting into box for the next use. The feeding funnel should be disinfected daily by boiling for 10 minutes. The feeding tubings should be disposed daily (Appendix I).
- Each resident should have separate feeding sets.
- All items should be thoroughly cleaned after use and kept in clean containers.
- Observe oral and nasal hygiene. Oral cavity should be cleansed at least three times a day with visual checking.

4.9.3 Prevention of pressure sore and associated infection is better than post-infection treatment

- Help residents to keep their skin and clothing clean and dry. Avoid prolonged skin contact with sweat, urine, faeces which will cause skin lesions and infection.
- Help bed-bound residents to maintain correct postures to minimize the risk of pressure sore.
- Apply proper techniques in lifting and transfer as well as proper positioning so as to avoid the development of pressure sore.
- Help residents to change posture at least once every two hours. When helping the resident change positions, avoid rubbing or bumping his/her body against the bed.
- Consider various pressure-reducing aids, such as cushioned mattress.
- Wear gloves when taking care of wounds. Observe aseptic procedures. Wash hands afterwards.
- Encourage regular exercise to enhance mobility and blood circulation.

4.9.4 Caring for residents with cognitive impairment

Residents suffering from cognitive impairment such as dementia, stroke or other brain lesions may develop difficulties in comprehension, expression and self-care. They may not cooperate with the staff members of the RCHEs in implementing preventive infection control measures or meeting the requirements of such measures.

- For residents who retain certain degree of cognition, staff members can guide them to adopt good personal hygiene to prevent infection.
- For residents with serious cognitive impairment, staff should pay extra attention and do the cleaning for them so as to ensure proper personal and environmental hygiene.

4.10 Care of residents newly discharged from hospitals

- Staff should help these residents to wash their hair, bathe and change their clothes.
- Pay extra attention to their health conditions. Residents showing respiratory symptoms should wear surgical masks and have temperature taken everyday.
- Newly recovered residents, e.g. after Norovirus gastroenteritis or scabies infection, should stringently observe personal hygiene.

5 Outbreak of communicable disease

5.1 What does outbreak of communicable diseases mean?

If the residents or staff in a RCHE develop similar symptoms one after another and the incidence rate is higher than that at ordinary times, this is an outbreak from the epidemiological point of view. A common example is the outbreak of influenza which usually peaks in February, March, July and August each year though sporadic cases may also occur at other times.

To decide whether there is an outbreak, day-to-day information on cases of communicable diseases in RCHEs has to be monitored. Some examples are cited below for reference. The ICO should closely monitor the situation if:

- The residents living in the same room or on the same floor develop similar symptoms in clusters within short period of time.
- The residents and staff concurrently develop similar symptoms in clusters, such as symptoms of influenza (fever, cough and sore throat). This means that cross-infection may have occurred in the RCHE.

- Two or more people develop similar symptoms after eating common food items. This means that a cluster of food poisoning may have occurred. The infective agent may be bacteria, viruses or toxins contained in the food.
- A single case of communicable disease may sometimes be treated as an outbreak. For example, a new disease unprecedented in the past or a situation which has major impact on public health like avian influenza in 1997 and SARS in 2003.

5.2 What should be done if outbreak is suspected?

Early detection of occurrence of communicable disease is essential to the prevention of its spread. For such purpose, all healthcare workers, including the ICOs and other staff in the RCHEs, should be responsible for close monitoring of the physical conditions of the residents to enable early detection of communicable diseases, particularly the statutory notifiable diseases and notify the relevant parties according to Appendix J as soon as possible so that control measures can be implemented promptly.

5.3 What are statutory notifiable communicable diseases?

Please refer to section 1.5 for details.

5.4 Is notification only applicable to confirmed cases of statutory notifiable communicable diseases?

Doctors are required by law to report suspected or confirmed cases of statutory notifiable communicable diseases to the Department of Health. If a home manager suspects or knows of such a case among the residents or staff of a RCHE or suspects or knows that any such person has been in contact with a case of statutory notifiable communicable disease, he/she should immediately report to the CENO of CHP and Director of Social Welfare. The ICO should contact the infected resident's attending doctor if there is query about the resident's condition. The Department of Health also encourages doctors, home managers or ICOs of RCHE to report suspected outbreak of communicable diseases to CENO of CHP and Licensing Office of Residential Care Homes for the Elderly of the Social Welfare Department. The notification form is shown in Appendix K. (Please refer to Appendix L for content of the relevant information.)

5.5 General guideline on the management of a suspected outbreak of communicable disease

- Isolate the patients properly and then arrange early medical treatment for them.
- Notify relevant parties according to established procedures after settling down the patients so that relevant staff from these parties can implement control measures promptly. (Please refer to the flow chart of the notification mechanism for communicable diseases in Appendix J for details.)
- Inform the relatives/guardians of the residents.
- Keep a proper medical record of residents and staff.
- Residents or staff falling sick should avoid participating in group activities.
- Minimize contact between residents and staff of different floors to avoid cross-infection, and arrange staff of the same team to take care of a fixed group of residents as far as possible in preparation of the shift roster.
- Actively inform and alert staff of other health care facilities such as clinics, hospitals etc. where the residents attend that there is currently an outbreak of communicable disease in the RCHE.
- In general, visit to the affected RCHE is discouraged. Personal hygiene of visitors should be strictly observed.

5.6 Disinfection during an outbreak of communicable disease

5.6.1 Disinfection of environment

- Disinfect furniture, floors and toilets with 1 in 49 diluted household bleach (mixing 1 part of 5.25% bleach with 49 parts of water); leave for 15-30 minutes before rinsing with water and mopping dry; special attention should be paid to the disinfection of toilets, kitchens and objects which are frequently touched such as light switches, door knobs and handrails.
- Use highly absorptive materials to preliminarily clean up surfaces contaminated with vomitus or excreta before performing the above disinfection procedure.
- Since household bleach usually contains 5.25% of available chlorine, care should be taken to avoid its use in metal surfaces as chlorine is corrosive to metal. 70% alcohol can be used if disinfection of metal surfaces is required.

5.6.2 Handling of linen

- During outbreak situation, soak linen soiled with blood/secretions in 1 in 49 diluted household bleach (5.25%) for 30 minutes before general handling.

5.7 Specific recommendations on management of selected communicable diseases

5.7.1 Food poisoning

- List names of people suspected to be infected and details of their medical records as well as information on food consumed in the RCHE within several days before the outbreak in the RCHE for use by the Department of Health during investigation.
- Save food remnants and vomitus for investigation.
- Disinfect articles or places soiled by excreta or vomitus.
- Clean and disinfect toilets with 1 in 49 diluted household bleach (5.25%).
- Ensure good personal, food and environmental hygiene in the RCHE.
- Maintain a hygienic environment in the kitchen and make sure that the refrigerator works properly.
- Infected staff, especially food handlers, should be granted sick leave to prevent spread of the disease.

5.7.2 Outbreak of respiratory tract infection

- Definition of outbreak of respiratory tract infection: There are increased number of residents and/or staff with upper respiratory tract symptoms which include cough, sore throat, running nose and fever above the usual pattern.
- The RCHE should implement relevant preventive measures to prevent spread of respiratory infection.
- List names of people suspected to be infected and details of their medical records.
- Enhance health surveillance for other residents like measuring body temperature.

- Switch on exhaust fans and open windows, if possible, to improve indoor ventilation.
- Infected residents not admitted to hospitals should wear surgical masks and be relocated to the same designated area/room for isolation as far as possible.
- Be stringent with personal and hand hygiene and observe for respiratory hygiene/cough etiquette (Appendix F).
- Group activities should be suspended during the outbreak period.
- Sick staff should refrain from work until fully recovered.
- Minimize staff movement, arrange the same group of staff to take care of the same group of residents as far as possible and provide them with appropriate protective gear.
- Depending on the situation, the Department of Health will consider giving vaccination to staff and residents who have not yet received influenza vaccination as well as distributing medicines for prophylaxis against influenza.

5.7.3 Outbreak of scabies

- List names of persons suspected to be infected and details of their medical records.
- Thoroughly trace the infected cases and the contacts (including staff, relatives or visitors) and arrange proper medical treatment for them.
- Implement contact precaution and preferably isolate the infected residents until treatment has been completed.
- Clothing and linen of infected persons should be handled separately and ensure that high temperature disinfection procedures are performed properly (Appendix M).
- Staff should put on protective gowns and gloves before touching infected residents under treatment and should wash their hands thoroughly after taking off the protective gowns and gloves.
- Instruct and supervise staff on the proper way to use and apply anti-scabies medication following doctor's instruction.
- Staff should regularly and repeatedly check the skin condition of both the infected residents and other residents, and seek medical advice if any suspected case is found.

6 Roles of RCHE staff

6.1 The basic rule for prevention of communicable disease in RCHEs

Although there are different communicable diseases requiring different control measures, the basic principles remain the same. They should observe personal, environmental and food hygiene, exercise regularly, maintain a balanced diet and take adequate rest to build up immunity.

6.2 Responsibilities of persons-in-charge or operators of RCHEs

- The operator should appoint either a nurse or a health worker (for a self-care hostel, the home manager) as an Infection Control Officer who is the key person responsible for dealing with matters related to infection control and prevention of the spread of infectious diseases in the residential care home. The duty list is detailed in Appendix B.
- The home manager should report suspected or confirmed cases of statutory notifiable communicable diseases among the residents or staff of the RCHE to the CENO and the Director of Social Welfare.
- If an individual resident is suspected to have contracted communicable disease, prompt consultation from the relevant CGAT or the VMO should be sought.
- When taking the sick resident to seek consultation at the out-patient clinic or the accident and emergency department or to register for hospitalization, the carer should take along the information card kept by the RCHE and produce the patient referral note.
- Keep proper personal health record for every resident. Body temperature should be checked regularly and recorded. If a resident has difficulties in communication, extra attention and inspections should be given. This helps early detection of

problems and reduces the risk of the spread of communicable diseases.

- Sick leave records of staff members should be kept.
- Encourage staff members to receive healthcare enhancement training especially infection control training from time to time and keep related training record.
- Set up an area or room with proper ventilation and hand washing facilities for isolation to prevent the spread of infection.
- Set up rules for visitors and encourage compliance.
- Encourage residents and staff members to receive influenza vaccination provided by the Department of Health. Provide such vaccination to staff members as far as possible.
- Ensure adequate hand hygiene facilities and PPE in the RCHEs.

6.3 Actions of Infection Control Officers during outbreaks

- When there is a suspected outbreak, the Central Notification Office (CENO) of the Centre for Health Protection and the Licensing Office of Residential Care Homes for the Elderly of Social Welfare Department should be notified as soon as possible. If the home is covered by CGAT (Community Geriatric Assessment Team), CGAT should also be notified.
- If indicated, please isolate the infected residents according to the instruction of the in-charge doctor to prevent the spread of the infection.

6.4 Useful telephone numbers and web pages

6.4.1 Report of suspected outbreak to the Department of Health

Central Notification Office (CENO) of the Centre for Health Protection,

- Telephone No. : 2477 2772
- Fax No. : 2477 2770

6.4.2 Other support and enquiry telephone numbers

Department of Health

Elderly Health Service, Department of Health —

Elderly Health Service 24-hour information hotline: 2121 8080

Telephone numbers of Visiting Health Teams under Elderly Health Service —

Operating hours: Monday to Friday: 8:30 am to 1:00 pm
2:00 pm to 5:30pm

Visiting Health Team	Telephone No.
Central and Western District Visiting Health Team	2816 6555
Eastern District Visiting Health Team	2569 6464
Wan Chai District Visiting Health Team	2891 4443
Southern District Visiting Health Team	2817 1584
Shamshuipo District Visiting Health Team	2779 9389
Kwun Tong District Visiting Health Team	2750 5665
Yau Tsim Mong District Visiting Health Team	2243 3635
Wong Tai Sin District Visiting Health Team	2383 2109
Kowloon City District Visiting Health Team	2383 2053
Shatin District Visiting Health Team	2145 8972
North District Visiting Health Team	2671 6745
Sai Kung District Visiting Health Team	2623 7980
Tai Po District Visiting Health Team	2671 6745
Islands District Visiting Health Team	2816 6555
Tsuen Wan District Visiting Health Team	2439 5806
Tuen Mun District Visiting Health Team	2458 0417
Kwai Tsing District Visiting Health Team	2439 5806
Yuen Long District Visiting Health Team	2458 0417

Food and Environmental Hygiene Department

Hotline: 2868 0000

Environmental Protection Department

Territory Control Office: 2835 1055

Social Welfare Department

Licensing Office of Residential Care Homes for the Elderly (LORCHE):
2961 7211 or 2834 7414
Enquiry Time: Monday to Friday: 8:45am - 1:00pm
2:00pm - 6:00pm

Inspectors of LORCHE (telephone list)

Inspector	Telephone No.
1	2961 7220
2	2961 7221
3	2961 7226
4	2961 7223
5	2961 7225
6	2961 7222
7	2961 7207
8	2961 7217

Inspector	Telephone No.
9	2961 7209
10	2961 7233
11	2961 7213
12	2961 7215
13	2961 7212
14	2961 7252
15	2961 7218
16	2961 7219
17	2961 7208

Hospital Authority

Enquiry hotline: 2300 6555

Hospital Authority's enquiry hotlines
(Community Geriatric Assessment Teams)

Hospital	Telephone No.
Tung Wah Group of Hospitals Fung Yiu King Hospital	2855 6144
Ruttonjee Hospital	2291 1947
Caritas Medical Centre	3408 7871
Haven of Hope Hospital	2703 8632
Kowloon Hospital	3129 7824
Queen Elizabeth Hospital	2332 4554
Kwong Wah Hospital	3517 5026 / 3517 5456
United Christian Hospital	2379 5154
Princess Margaret Hospital	2749 8212
Shatin Hospital	2636 7618
Tai Po Hospital	2607 6932
North District Hospital	2683 7745
Tuen Mun Hospital	2468 5801

Hospital Authority's enquiry hotlines and fax numbers (Community Nursing Services)

Hospital Cluster	Community Nursing Service Centre	Tel. No.	Fax No.
Hong Kong East Cluster	Pamela Youde Nethersole Eastern Hospital CNS Hotline	2595 6298	2960 1498
Hong Kong West Cluster	Tsan Yuk CNS Centre	2589 2280	2549 8474
	Queen Mary Hospital CNS Station	2855 3314	2855 4535
	Tung Wah Hospital CNS Station	2589 8266	2548 2912
Kowloon Central Cluster	Queen Elizabeth Hospital CNS Referring Station	2958 2451	2374 5897
	Kowloon Hospital CNS Centre	3129 6969	2761 4258
Kowloon East Cluster	Kowloon East Cluster CNS Headquarter	2340 0815 3513 4517	2349 6616
Kowloon West Cluster	Caritas Medical Centre Main Centre	3408 7701	2745 8301
	Kwong Wah Hospital CNS Centre	3517 5187 3517 2762	3517 5188
	Princess Margaret Hospital CNS Station	2741 4317	2990 3482
	Yan Chai Hospital CNS Station	2417 8831	2405 0015
	Our Lady Maryknoll Hospital CNS Centre	2354 2222	2354 9867
New Territories East Cluster	Alice Ho Miu Ling Nethersole Hospital CNS Centre	2689 2777	2666 9404
	North District Hospital CNS Centre	2683 7742	2683 7743
	PWH Community Outreach Service Team Centre	2604 9639	2693 9619
	SH Community Outreach Service Team Centre	2636 7745	2637 4228
New Territories West Cluster	Tuen Mun Hospital CNS Liaison Office	2468 5713 2468 6664	2453 2317

6.4.3 Websites

Organization	Website
Department of Health	http://www.dh.gov.hk
Centre for Health Protection	http://www.chp.gov.hk
Central Notification Office (CENO)	http://www.chp.gov.hk/ceno
Elderly Health Service	http://www.elderly.gov.hk
Central Health Education Unit	http://www.cheu.gov.hk
Food and Environmental Hygiene Department	http://www.fehd.gov.hk
Hospital Authority	http://www.ha.org.hk
Social Welfare Department	http://www.swd.gov.hk
Center for Disease Control and Prevention	http://www.cdc.gov
World Health Organization	http://www.who.int

7 Appendix

Appendix A: Statutory notifiable communicable diseases

- Acute poliomyelitis
- Amoebic dysentery
- Bacillary dysentery
- Chickenpox
- Cholera
- Community-associated MRSA infection
- Dengue fever
- Diphtheria
- Food poisoning
- Influenza A(H5), Influenza A(H7) or Influenza A(H9)
- Japanese Encephalitis
- Legionnaires' disease
- Leprosy
- Malaria
- Measles
- Meningococcal infections
- Mumps
- Paratyphoid fever
- Plague
- Rabies
- Relapsing fever
- Rubella
- Scarlet fever
- Severe Acute Respiratory Syndrome
- *Streptococcus suis* Infection
- Tetanus
- Tuberculosis
- Typhus
- Typhoid fever
- Viral hepatitis
- Whooping cough
- Yellow fever

Footnote: Please refer to CENO on-line website http://www.chp.gov.hk/ceno for the update list of statutory notifiable diseases.

Appendix B: Duties of infection control officers (ICOs) in RCHEs*

All RCHEs should appoint either a nurse or a health worker (for a self-care hostel, the home manager) as an Infection Control Officer who is the key person responsible for dealing with the following matters:

(a) Coordinate and oversee all matters related to infection control and the prevention of infectious diseases in the residential care home;

(b) Disseminate updated information and guidelines on infection control to all staff and residents in the residential care home and to orientate new staff to these updated information;

(c) Assist the home manager in arranging training on infection control for staff;

(d) Assist the home manager in overseeing that the infection control guidelines are being observed and implemented properly, including the observation of personal, environmental and food hygiene;

(e) Oversee that all medical equipment and other instruments are properly disinfected after use, and soiled linens and wastes are properly handled and disposed of;

(f) Assist the home manager in arranging the provision of the necessary personal protective equipment (PPE) and advise and supervise staff on the proper application and disposal of PPE;

(g) Observe for signs and symptoms of infectious diseases (such as unusual clustering of fever, upper respiratory tract symptoms and unusual clustering of gastrointestinal symptoms) in residents and staff; assist the home manager to report cases or suspected cases of infectious diseases to the Licensing Office and the Centre for Health Protection (CHP) of the Department of Health as appropriate; if the home is covered by CGAT (Community Geriatric Assessment Team), CGAT should also be informed; provide information as necessary to CHP to facilitate their investigation; and collaborate with CHP to contain the spread of the infectious disease; and

(h) Assist the home manager in assessing the risk of infectious disease outbreak in the residential care home; regularly review and devise strategies to prevent infectious disease outbreaks through consultation with the home manager, medical staff (CGAT or VMO) and the Department of Health.

* The above appendix is provided by the Social Welfare Department and has been incorporated in the Code of Practice for Residential Care Homes (Elderly Persons) (October 2005 Revised Edition). Readers should check if the content has been further revised by the Social Welfare Department.

Appendix C: Checklist of signs and symptoms of communicable diseases

The followings are some common signs and symptoms of infection in the elders:

1. Fever or body temperature 1℃ or more above baseline..... ( )
2. Lowered blood pressure, i.e. systolic pressure below 90mmHg..... ( )
3. Malaise..... ( )
4. Loss of appetite and/or unexplained weight loss ..... ( )
5. Confusion, drowsiness, feeling irritable and restless..... ( )
6. Sudden change in body functioning, e.g. increased fragility or falling over for unknown reason..... ( )
7. Running nose, sneezing..... ( )
8. Headache..... ( )
9. Sore throat..... ( )
10. Cough..... ( )
11. Increased sputum production..... ( )
12. Blood stained sputum..... ( )
13. Chest pain on breathing..... ( )
14. Shortness of breath..... ( )
15. Red eye..... ( )
16. Abdominal pain..... ( )
17. Vomiting..... ( )
18. Diarrhoea..... ( )
19. Sudden onset of or increased incontinence..... ( )
20. Difficult urination..... ( )
21. Painful urination..... ( )
22. Frequent urination..... ( )
23. Cloudy urine..... ( )
24. Blood in urine..... ( )
25. Sudden onset of pruritis..... ( )
26. Rash..... ( )
27. Local symptoms of skin reddening, swelling or pain..... ( )
28. Pressure sore with pus draining or offensive odour..... ( )
29. Increased heart rate..... ( )

Elders with higher risk of infection

1. Bedridden elders ( )
2. Elders of older age (over 75) ( )
3. Diabetic elders ( )
4. Elders with poor body immunity
   e.g. elders with renal failure or cancer ( )
5. Elders with cognitive impairment and low self-care ability ( )

Invasive medical devices and procedures

1. Urethral catheter ( )
2. Intermittent self-catheterization ( )
3. Tracheostomy tube ( )
4. Nasogastric catheter (Ryle's tube) ( )
5. Percutaneous gastric tube feeding (gastrostomy tube) ( )
6. Continuous Ambulatory Peritoneal Dialysis ( )

Apppendix D: Fever record for residents

Name of RCHE: _____ Contact person: _____

Telephone No.: _____

Date	Number of residents with fever	Bed number	Number of residents with fever seeking medical treatment			Number of residents admitted to Accident & Emergency Dept. with fever	Number of residents admitted to hospital with fever
			Visiting Medical Officer	Community Geriatric Assessment Team	Private practitioner		

Appendix E: Guidelines for Good Handwashing

Handwashing, when done correctly, is an important personal hygiene practice to prevent contracting and spreading communicable diseases.

When should we wash our hands?

- Before touching the eyes, nose and mouth
- Before eating or handling food
- After using the toilet
- When hands are contaminated by respiratory secretions, e.g. after coughing or sneezing
- After touching public installations or equipment, such as escalator handrails, elevator control panels or door knobs
- After changing diapers or handling soiled articles when looking after young children or the sick

Steps for good handwashing

1. Wet hands under running water.
2. Apply liquid soap and rub hands together to make a soapy lather.
3. Away from the running water, rub the palms, backs of hands, between fingers, backs of fingers, thumbs, finger tips and wrists. Do this for at least 20 seconds.
4. Rinse hands thoroughly under running water.
5. Dry hands thoroughly with either a clean cotton towel, a paper towel, or a hand dryer.
6. The cleaned hands should not touch the water tap directly again.
    - The tap may be turned off by using the towel wrapping the faucet; or
    - after splashing water to clean the faucet; or
    - by another person.

Please note :

- Towels should never be shared.
- Used paper towel should be properly disposed of.
- Personal towels to be reused must be stored properly and washed at least once daily. It is even better to have more than one towel for frequent replacement.
- When hands are not visibly soiled, application of 70-80% alcohol-based handrub is equally effective for disinfection.

Hand Hygiene Technique :

1.

Palm to palm

2.

Right palm over left dorsum with interlaced finger & vice versa

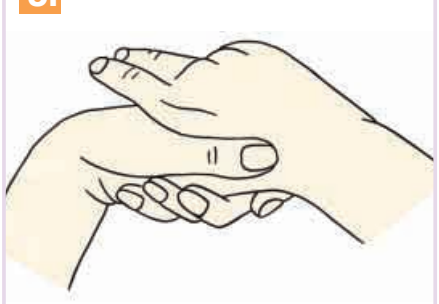
3.

Palm to palm with fingers interlaced

4.

Backs of fingers to opposing palm with fingers interlocked

5.

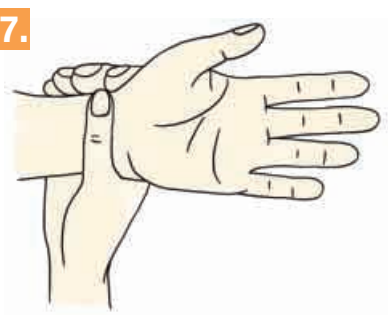


Rotational rubbing of right thumb clasped over left palm & vice versa

6.

Rotational rubbing backwards and forwards with clasped fingers of right hand in left palm & vice versa

7.



Wrists are rubbed

Appendix F: Respiratory hygiene/cough etiquette

The following measures are recommended for all individuals with signs and symptoms of a respiratory infection.

- Cover nose and mouth when coughing or sneezing.
- Use tissue paper to contain respiratory secretions and dispose them in the nearest non-touch garbage bin with lid or flush them away in the toilet.
- Put on a surgical mask for those with signs and symptoms of respiratory infection.
- Perform hand hygiene immediately (e.g. hand-washing with soap and water, or alcohol-based handrub) after contacting respiratory secretions or touching objects contaminated with respiratory secretions.

Institutions should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for residents and visitors.

- Provide tissue paper and non-touch garbage bin with lid for disposal of used tissue.
- Ensure that supplies for hand washing (i.e. liquid soap, paper towels) are consistently available near sinks and provide conveniently located dispensers of alcohol-based handrub.
- Put up signage and remind residents and visitors not to spit on floor.

Appendix G: World Health Organization's ten principles for safe food preparation

1. Ensure proper food hygiene. Take extra care when selecting processed food.
2. Cook food thoroughly.
3. Eat cooked foods immediately.
4. Store cooked foods carefully.
5. Reheat cooked foods thoroughly.
6. Avoid contact between raw foods and cooked foods.
7. Wash hands frequently.
8. Keep all kitchen surfaces meticulously clean.
9. Protect foods from insects, rodents and other animals.
10. Use safe water.

Appendix H1: Commonly used disinfectants

Name	Concentration	Usage	Properties
Sodium Hypochlorites e.g. household bleach containing 5.25% sodium hypocholorites	-1% (10,000 ppm) Dilution ratio 1 in 4* -0.1% (1,000 ppm) Dilution ratio 1 in 49* -0.05% (500 ppm) Dilution ratio 1 in 99* * Please refer to Appendix H2 for "Preparation of Bleach"	Environmental or equipment disinfection	• Mix with water • Corrosive to metals • Avoid contact with skin or mucous membrane • Contact with acids liberate toxic gas • Diluted solution decomposes rapidly and its effectiveness will decrease • Freshly prepared diluted bleach should be used within 24 hours
Alcohols: e.g. - Ethyl Alcohol - Isopropyl Alcohol	70%	Skin, metal surface or equipment disinfection	• Inflammable liquid • Rapid action but volatile • Poor penetration into organic matter
Diguanides: e.g. Chlorhexidine: Hibitane e.g. Chlorhexidine + cetavlon : Savlon	aqueous 1:1000 aqueous 1:100	Skin and mucous membrane disinfection and wound dressing	• Low toxicity • Low toxicity • Detergent properties
Aldehydes e.g. Glutaraldehyde: Cidex	2%	Equipment disinfection	• Alkaline solution • Irritate eyes, skin and respiratory mucosa • Need activation and has a limited effective period (14-28 days)

Appendix H2: Preparation of bleach

Procedures of preparing diluted bleach

1. Ensure and be aware of good ventilation when diluting or using bleach.
2. Put on protective gear when diluting or using bleach as it irritates mucous membranes, the skin and the airway.
3. Cold water should be used for dilution as hot water decomposes the active ingredient of bleach and renders it ineffective.
4. Bleach containing 5.25% sodium hypochlorite should be diluted as follows:
   - 1 in 99 diluted household bleach
     (mixing 1ml of bleach with 99ml of water)
   - 1 in 49 diluted household bleach
     (mixing 1ml of bleach with 49ml of water)
   - 1 in 4 diluted household bleach
     (mixing 1ml of bleach with 4ml of water)
5. For accurate measurement of the amount of bleach added, a tablespoon or measuring cup can be used.

Recommended Use of Sodium Hypochlorites

Dilution ratio	Concentration	Dilution	Usage
1 in 4	10,000 ppm (1%)	one part of household bleach (5.25% hypochlorite solution) in 4 parts of water	For facilities contaminated with blood spillage
1 in 49	1,000 ppm (0.1%)	one part of household bleach (5.25% hypochlorite solution) in 49 parts of water	For surfaces or articles contaminated with vomitus, excreta or secretions
1 in 99	500 ppm (0.05%)	one part of household bleach (5.25% hypochlorite solution) in 99 parts of water	For general environmental cleaning

Precautions

- Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
- Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.
- Bleach should not be used together or mixed with other household detergents as this reduces its effectiveness in disinfection and causes chemical reactions. For instance, a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. This could result in accidents and injuries. If necessary, use detergents first and rinse thoroughly with water before using bleach for disinfection.
- As undiluted bleach liberates a toxic gas when exposed to sunlight, it should be stored in a cool and shaded place out of reach of residents.
- Sodium hypochlorite decomposes with time. To ensure its effectiveness, it is advised to purchase recently produced bleach and avoid over-stocking.
- For effective disinfection, diluted bleach should be used within 24 hours after preparation as decomposition increases with time if left unused.

Appendix I: Cleansing and disinfection of articles commonly used in RCHEs

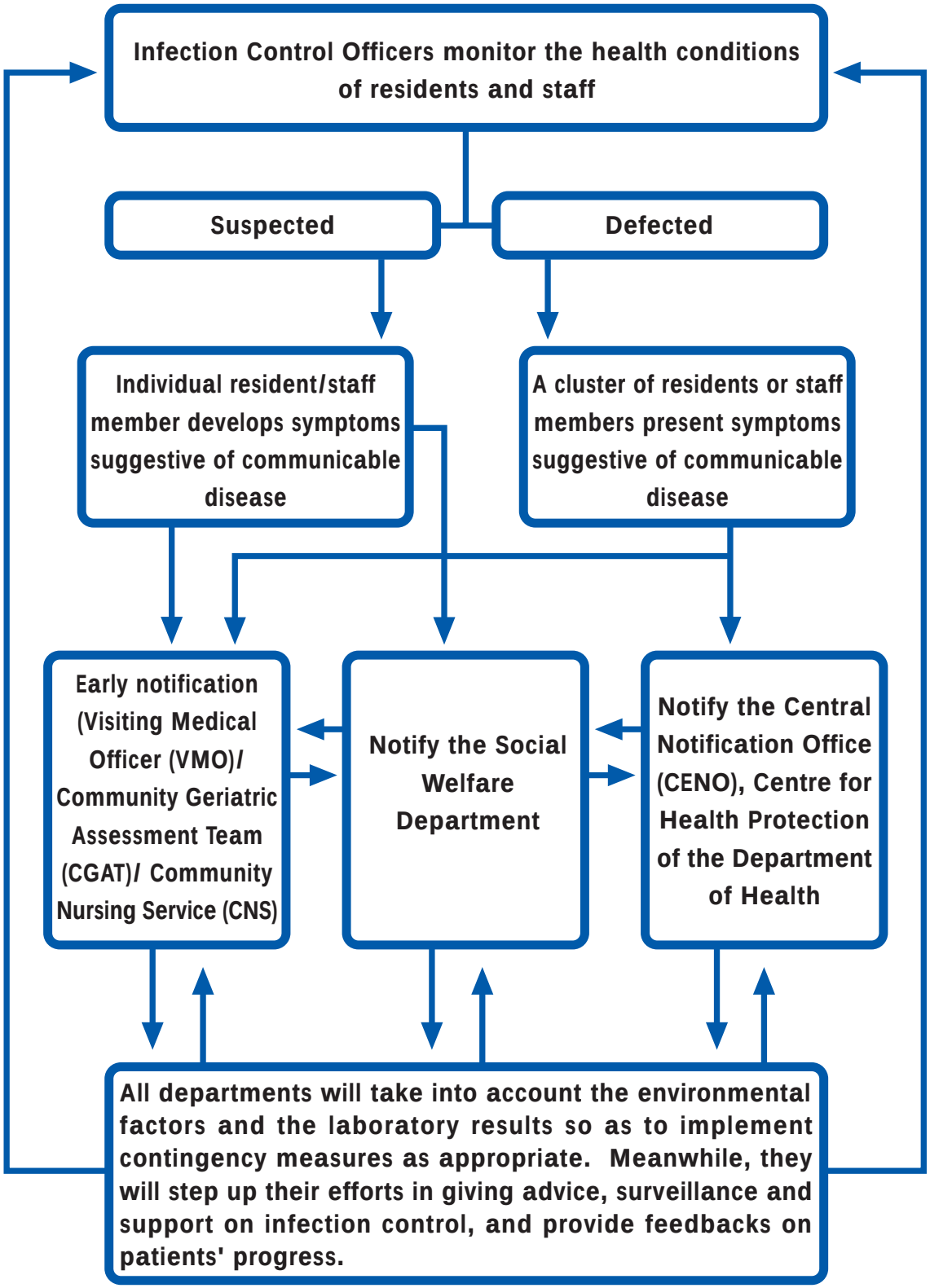
Articles	Recommended method	Alternative method*
Bottle, suction	Clean with detergent and water everyday. Immerse in 1 in 49 diluted household bleach (5.25%) for 10 minutes. Rinse and store dry.	
Connection tubing and Y-shape connector	Disposable	Every time after suction of sputum, rinse it thoroughly by making full use of the suctioning power of the machine. Immerse in 1 in 49 diluted household bleach (5.25%) for at least 10 minutes. Rinse and store dry.
Suction tubing	Disposable	
Tracheostomy connection tubing	Inner and outer tubes should be cleaned separately. Clean it with cotton buds under water tap and then immerse in 1 in 49 diluted household bleach (5.25%) for at least 10 minutes. Rinse and store dry.	Follow manufacturer's instruction.
Mouth gag	Clean with detergent and water. Immerse in 1 in 49 diluted household bleach (5.25%) for 10 minutes. Rinse and store dry.	
Nebulizer	Clean with detergent and water everyday. Immerse in 1 in 49 diluted household bleach (5.25%) for 10 minutes. Rinse and store dry.	Follow manufacturer's instruction.
Nebulizer mask	Disposable	
Nebulizer tubings		
Oxygen cannula		

Articles	Recommended method	Alternative method*
Oxygen tubings	Disposable	Follow manufacturer's instruction.
Oxygen mask		
Tongue depressor (wooden)	Disposable	
Thermometer (mercury)	Wash with detergent and cold water and then immerse in 70% alcohol for not less than 10 minutes. Store dry.	
Dressing trolley	Clean with detergent and water. Wipe dry. Wipe the trolley surface with 70% alcohol.	
Feeding set (feeding funnel and tubings)	After each feed, the feeding set should be flushed with water and air dried before putting into box for the next use. The feeding funnel should be disinfected daily by boiling for 10 minutes. The feeding tubings should be disposed daily.	Follow manufacturer's instruction.
Bowl, plastic	Clean with detergent and water. Store dry.	
Urine measuring jar	Rinse with water first then clean with detergent. Disinfect with disinfectant e.g. 1 in 49 diluted household bleach (5.25%), rinse and store dry.	
Bedpan	Drain away and clean with detergent and water. Then cleanse with a brush and disinfect with 1 in 49 diluted household bleach (5.25%). Rinse and store dry.	

Articles	Recommended method	Alternative method*
Commode	Wash with detergent and water after each use and regularly. If any contamination noted, wash with detergent and water before cleansed with a brush and disinfect with 1 in 49 diluted household bleach (5.25%). Rinse and store dry.	
Gown and Cap	Using disposable equipment is most desirable.	For contaminated/soiled reusable textile items, soak in 1 in 49 diluted household bleach (5.25%) for 30 minutes before general handling.
Face-shield or goggles	Clean with detergent and water first. Immerse in 1 in 49 diluted household bleach (5.25%) for 10 minutes. Rinse and store dry.	
Gloves (disposable latex gloves or household gloves) Note: Wearing gloves cannot replace hand hygiene.	Using disposable latex gloves is most desirable.	For reusable household gloves: disinfect by immersing in 1 in 49 diluted household bleach (5.25%) for at least 10 minutes first. Clean with detergent and water. Check if there are any small holes (by filling with air first and immersing in water to see if there are any air bubbles leaking out). If there is no hole, air dried before reuse. Please note that finishing the above procedure does not guarantee that these reused gloves can safely protect the users.
Sphygmomanometer cuff	Regular cleansing. If contaminated with body fluid, soak in 1 in 49 diluted household bleach (5.25%) for 30 minutes before general handling.	
Stethoscope	Wipe with 70% alcohol regularly.	

* If the recommended methods are not feasible in RCHEs, adopt the alternative methods instead.

Appendix J: Flow chart of the notification mechanism for communicable diseases in RCHEs



Appendix K: Notification form for suspected infectious disease outbreak in RCHE

Suspected Infectious Disease Outbreak in RCHE
NOTIFICATION FORM

To : Central Notification Office (CENO), Centre for Health Protection (Fax : 2477 2770)

cc : LORCHE (Fax : 2574 4176 or 3106 3058)

CGAT (if applicable) (Fax :_____)

NOTE : To enable prompt investigation and control of outbreak, please call CENO by phone (2477 2772) before sending fax notification.

Name of institution :_____ (Code no:_____)

Address of institution :_____

_____

Contact person :_____ (Post:_____) Tel : _____

Total no. of residents :_____ Total no. of staff :_____ Fax : _____

No. of sick residents : _____(No. admitted into hospital : _____)

No. of sick staff : _____(No. admitted into hospital : _____)

Common symptoms : (May tick multiple)

¡ … Fever ¡ … Sore throat

¡ … Cough ¡ … Runny nose

¡ … Diarrhoea ¡ … Vomiting

¡ … Skin rash ¡ … Blisters on hand/foot ¡ … Oral ulcers

¡ … Others (Please specify : _____)

Suspected disease :_____

Reported by : _____ Contact tel. : _____

Signature : _____ Date of fax : _____

F-RCHE-20060717e

Appendix L: Common information required by staff of CHP (Centre for Health Protection)

Preliminary information

(1) Name of the RCHE
(2) Address of the RCHE
(3) Name, position and telephone number of the contact person
(4) Number of sick residents and number of residents admitted to hospital
(5) Number of sick staff members
(6) Total number of residents in the RCHE
(7) Total number of staff members in the RCHE

Further information in details (if necessary)

(1) Detailed information of the sick

- Name
- Age
- Sex
- ID number
- Room number and floor number
- Symptoms
- Date of onset of illness
- Medical consultation record

(2) Resident list
(3) Staff list (stating the floor or area where the staff work)
(4) Staff sick leave record
(5) Influenza vaccination record for residents and staff
(6) Floor plan of the RCHE (stating the room or bed number)
(7) Timetable for residents' activities
(8) Food menu

Remarks: Please refer to CENO on-line website www.chp.gov.hk/ceno for update list of statutory notifiable diseases.

Appendix M: Scabies

Scabies is an infectious skin disease caused by a barely visible mite. It affects people of all ages. Due to weakened immunity, elderly are more susceptible to scabies. Outbreaks of scabies have been reported in hospitals, hostels and elderly homes.

Route of infection

Scabies spreads through direct contact with an infected person. As mites and their eggs can be left on clothing and bed-linen, contact with clothing or bed-linen of the infected person can lead to infection.

The scabies mite

The mite is too small to be visible by naked eye. The female mite penetrates into the skin by its forelegs and mouth. It digs tunnels and lays down its eggs. The eggs hatch in 3 to 4 days. The mites mature in about 10 days, and then start to breed the next generation.

Symptoms of scabies

1. The main symptom is intensive itchiness in the infected areas, which is more severe at night and after hot bath.
2. The usual affected areas are the finger webs and the flexural areas of wrists, elbows, armpits, nipples, lower abdomen and external genitalia. The face and scalp of elderly are usually spared.
3. Rash develops at the point where the mite penetrates the skin. Thread like tunnel (usually less than 1 cm) can be seen as they dig tunnels under the skin.
4. If the infected person is allergic to the mite or its excreta, he or she may develop blisters.

Norwegian or Crusted Scabies

1. It is a rare form of scabies associated with thousands of mites harboring in the skin.
2. Individuals suffered from Norwegian scabies may have marked scales and crusts, particularly on the palms and soles.
3. Face and scalp can also be affected.
4. It occurs more frequently among people with weakened immunity, physical debilitation, sensory impairment or mental retardation.
5. It has enhanced potential for transmission.

Management of scabies

Management of residents and staff in elderly home

1. Staff should closely monitor the conditions of themselves and their residents. Immediate medical advice should be sought when a person have symptoms suggestive of scabies infection. If there are several residents and staff confirmed to have scabies, the staff should report to the Centre for Health Protection and Social Welfare Department.
2. During a scabies outbreak, people who are in close contact with the patient, e.g. roommates and staff, should apply the anti-scabies medication to prevent the spread of the disease.
3. Staff should wear gloves and apron when performing cleansing work or taking care of the infected patient. After direct care, care-givers should change their working clothes and wash their hands thoroughly.

Management of the clothing and bed-linen

1. Patient's clothing, bed-linen, pillowcase, etc., should be washed separately from those of their family members or other elderly home residents.
2. Patient's clothing, bed-linen, pillowcase, etc., must be boiled in hot water (60℃ or above, for not less than 10 minutes) to get rid of the mite and their eggs.
3. Place all non-washable personal items such as shoes, mattress, etc. in a plastic bag and seal them up for at least 14 days before they can be used as usual.

Medical treatment

1. Effective medical treatment for scabies include anti-scabies agents (e.g. Benzyl Benzoate Emulsion) and drugs to control itchiness.

How to apply Benzyl Benzoate Emulsion

1. In the evening after taking a bath, scrub and dry the body thoroughly. With the help of another person, use a brush to paint the emulsion from the neck downwards to cover the whole body (finger webs and toe webs should be included, but not the head). Then put back the same clothes.
2. On the next morning, repeat the application without taking a bath. Then put back the same clothes.
3. On the next evening, take a hot bath and clean the whole body with soap and put on clean clothes afterwards.
4. In between the two applications of the emulsion, there is no need to change the clothing or bed linen.

5. Please note that two applications of the emulsion suffice to kill the mite except in Norwegian scabies. Over treatment gives rise to irritation and causes contact dermatitis. Re-apply the emulsion to the hands after washing since the previous coating has been removed by water.
6. After treatment, the itching may persist for 1 to 2 weeks. If the itchiness lasts for more than 2 weeks or if there are other changes in the skin, consult your doctor again.
7. Aggressive treatment with multiple applications over the entire body at an interval of 2-7 days may be needed for Norwegian scabies. Please consult the doctor in-charge for instruction and re-evaluation.

Appendix N: Norovirus Infection

Causative agent

This infection is caused by a group of viruses known as noroviruses, also known as "Norwalk-like viruses" or small round structured viruses (SRSVs). These viruses are a common cause of sporadic cases of acute gastroenteritis as well as outbreaks of food poisoning and acute gastroenteritis, especially in elderly homes and schools. The disease affects people of all age groups and tends to be more common during winter.

Clinical features

The disease is usually self-limiting with symptoms of nausea, vomiting, diarrhoea, abdominal pain, low-grade fever and malaise. The symptoms usually last for 12 to 60 hours.

Modes of transmission

The infection can be transmitted via the following ways:

- by food or water contaminated with the virus;
- by contact with vomitus or faeces from infected persons;
- by contact with contaminated objects; or
- by aerosol spread with contaminated droplets of splashed vomitus.

Incubation period

The incubation period is usually 24 to 48 hours.

Management

Given adequate fluids to prevent dehydration and supportive treatment, the disease is usually self-limiting, lasting 1 to 3 days. Antibiotics are of no value in treatment.

Prevention

- Maintain high standards of personal, food and environmental hygiene.
- Wash hands before handling food and eating, and after going to toilet.
- All food, particularly shellfish, should be cooked thoroughly before consumption.
- Food handlers and caretakers developing vomiting or diarrhoea should refrain from work and seek medical advice.
- Wear gloves and a mask while disposing of or handling vomitus and faeces, and wash hands thoroughly afterwards.
- Clean and disinfect soiled linens, clothes and surfaces promptly and thoroughly with household bleach (5.25%) diluted in a ratio of 1 part of bleach in 49 parts of water. Wash hands thoroughly afterwards.
- No vaccine is available for norovirus infection.

Disinfection of environment after vomiting incidents

- Keep residents away from the area during the cleaning process.
- Wear gloves and a mask while removing the vomitus.
- Use disposable towels to wipe away all the vomitus from outside inward, before applying diluted bleach (1 in 49) to the surface and the neighbouring area (e.g. within 2 metres of the vomitus).
- Leave bleach on the soiled surface for 15-30 minutes to allow time for the bleach to inactivate viruses before rinsing the surface with water and mop dry.
- Floor mops should not be used for cleaning the vomitus.

Members of Editorial Board

Centre for Health Protection,

Department of Health

- Central Health Education Unit
- Infection Control Branch
- Surveillance and Epidemiology Branch

Elderly Health Service, Department of Health